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IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In the Application of:

Attorney Docket No.: 2873-US

Peter Robert Baum and William Christian Fanslow III

Serial No.: 09/778,187

Group Art Unit: 1644

Filed: February 06, 2001

Examiner: Roark, J. H.

For: MOLECULES DESIGNATED LDCAM

DECLARATION UNDER 37 C.F.R. §1.131Commissioner of Patents
P. O. Box 1450
Alexandria VA, 22313-1450

COPY

Sir:

We, the undersigned, hereby declare that:

1. We are the same Peter Robert Baum and William Christian Fanslow III named as co-inventors on the above-identified application. Prior to December 03, 1997, a nucleic acid encoding human LDCAM was isolated, the sequence of said nucleic acid was determined, and the amino acid sequence encoded by said nucleic acid was deduced, in the United States of America by us, the co-inventors named in the subject application, as evidenced by the Exhibit enclosed herewith.

2. The nucleic acid and amino acid sequence data presented in the Exhibit were obtained and the works that generated those data were completed in this country prior to December 03, 1997. The amino acid sequence presented in the Exhibit (HuB7L1-CoR) is identical to SEQ ID NO: 2 of the instant application, which is the amino acid sequence of human LDCAM.

3. We therefore submit that this showing of facts is sufficient in character and weight as to establish that the invention of this application was reduced to practice prior to December 03, 1997, the earliest possible 102(e) date of the cited publication, U.S. Patent Application Publication US 2002/0198147 A1.

4. We further declare that all statements made herein of our own knowledge are true, and that all statements made on information and belief are believed to be true, and further that these statements were made with the knowledge that willful false statements and the like so made are punishable by fine or imprisonment, or both,

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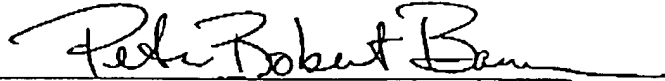
Declaration under 37 C.F.R. § 1.131

2873-US

under Section 1001 of Title 18 of the United States Code, and that such willful false statements may jeopardize the validity of the application or any patent issued thereon.

5.22.03

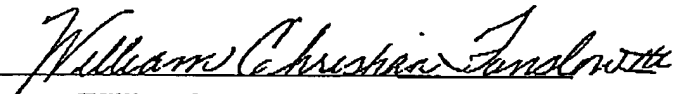
Date



Peter Robert Baum

5-23-03

Date



William Christian Fanslow III

ee222601 5/22/03

EXHIBIT

Serial No. 09/778,187

2873-US

HuB7L1-CoR Full Length

(Linear) (Six Base) MAP of: 4469-Wi26.Seq check: 1995 from: 1 to: 1535
[hollingsworth.cnodna.4469]
req 4469 HuB7L1 counterstructure Wi26 pool314-28#34 FINAL SEQUENCE FILE
3mGel1648, #7046, #5080 / 3mGel1663 dpc7266,67 / 2mGel1671 dpc7305,6
4469-wi26

```

      B
ENKs      B      B
aomi      c      aX
etaE      g      mh
1131      l      Ho
//          Sal-22778 → /
GCGGCGCGCGCGGACATGGCGAGTGTAGTGCTGCCGAGCGGATCCCAAGTGTGCGGCGGCA
1 -----+-----+-----+-----+-----+-----+-----+-----+ 60
CGCGGCGCGCGGCTGTACCGCTCACATCAAGACGGCTCGCCTAGGGTCACACGCGCGCGT
a      M A S V V L P S G S Q C A A A -

      B
      s
N      B      B      P
s      BsKNH AsBSX B1      ES D
P      aaaaa vrgmm a2      aa s
B      nHsre aFlaa n8      rp a
2      11112 11111 26      11 1
      // // /
GCGGCGCGCGCGGCGGCGCTCCCGGCTCCGGCTCTGCTGTTGCTCTTCTCCGCC
61 -----+-----+-----+-----+-----+-----+-----+ 120
CGCGGCGCGCGCGCGGAGGGCCGAGGCGGAGGCGGAGGCGGAGGCGGAGGCGGAGGCGG
a      A A A A A P P G L R L R L L L L L F S A -

      N      A
ss      l
ps      w
Bt      N
22      1
GCGGCACTGATCCCCACAGGTGATCGGCAGAAATCTGTTTACGAAAGACGTGACAGTGATC
121 -----+-----+-----+-----+-----+-----+-----+ 180
CGCGGTGACTAGGGGTGTCCACTACCGTCTTAGACAAATGCTTTCTGCACTGTCACTAG
a      A A L I P T G D G Q N L F T K D V T V I -
Signal seq.
GAGGGAGAGGTTGCGACCATCAGTTGCCAAGTCAATAAGAGTGACGACTCTGTGATTGAG
181 -----+-----+-----+-----+-----+-----+-----+ 240
CTCCCTCTCCAACGCTGGTAGTCAACGGTTCAGTTATTCTCACTGCTGAGACACTAAGTC
a      E G E V A T I S C Q V N K S D D S V I Q -

      E
A      C
l      o
w      s
N      5
      7
      S      B
      t      s
      u      M
```

1 1 1 1
CTACTGAATCCCAACAGGCAGACCAITTTATTTTCAGGGACTTCAGGCCTTTGAAGGACAGC
241 -----+-----+-----+-----+-----+ 300
GATGACTTAGGGTTGTCCGTCTGGTAAATAAAGTCCCTGAAGTCCGGAAACTTCCTGTGCG
a L L N P N R Q T I Y F R D F R P L K D S -

A P B
I A S S
w P h m
N o A B
1 1 1 1
#30518 (7A) →
AGGTTTCAGTTGCTGAATTTTTCTAGCAGTGAAGTCAAGTATCATTGACAAACGTCTCA
301 -----+-----+-----+-----+ 360
TCCAAAGTCAACGACTTAAAAAGATCGTCACTTGAGTTTCATAGTAACTGTTTGCAGAGT
a R F Q L L N F S S S E L K V S L T N V S -

#30509 (1A/6A) → #30516
ATTTCTGATGAAGGAAGATACTTTTGCCAGCTCTATACCGATCCCCACAGGAAAGTTAC
361 -----+-----+-----+-----+ 420
TAAAGACTACTTCCTTCTATGAAAACGGTCCGAGATATGGCTAGGGGGTGTCTTTTCAATG
a I S D E G R Y F C Q L Y T D P P Q E S Y -

X B B B
C s C s c
m A a B R
(5A) → 1 1 1 1 5
ACCACCATCACAGTCTCTGGTCCCACCAAGTAACTCTGATGATCGATATCCAGAAAGACACT
421 -----+-----+-----+-----+ 480
TGGTGGTAGTGTTCAGGACCAGGGTGGTGCATTAGACTACTAGCTATAGGTCTTTCTGTGA
a T T I T V L V P P R N L M I D I Q K D T -

B H E B
s i n a a
g c e l
1 2 1 1
#30514 (4A) →
GCGGTGGAAGGTGAGGAGATTGAAGTCAACTGCCTATGGCCAGCAAGCCAGCCACG
481 -----+-----+-----+-----+ 540
CGCCACCTTCCACTCCTCTAAGTTCAGTTGAAGTGACGATACCGGTGCTTCGGTCCGGTGC
a A V E G E E I E V N C T A M A S K P A T -

E
a
r
1
ACTATCAGGTGGTTCAAAGGGAACACAGAGCTAAAAGGCAAATCGGAGGTGGAAGAGTGG
541 -----+-----+-----+-----+ 600
TGATAGTCCACCAAGTTTCCCTTGTGTCTCGATTTTCCGTTTAGCCTCCACCTTCTCACC
← #30517 (5B/6B/7B)

a T I R W F K G N T E L K G K S E V E E W -
B
s
E
N
A pH c
A s sP p lg o D D
f p pv a 2i 5 r r
l H Bu L 8A 7 d a
3 l 22 l 6l 1 1 2
/
TCAGACATGTACACTGTGACCACTCAGCTGATGCTGAAGGTGCACAAGGAGGACGATGGG
601 ----- 660
AGTCTGTACATGTGACACTGGTCAGTCGACTACGACTTCCACGTGTTCTCTCTGCTACCC
a S D M Y T V T S Q L M L K V H K E D D G -
B
s
p pH
p p lg
u s 2i S p s s
M s 8A c t M B
l l 6l l l l 2
/
GTCCCAGTGTATCTGCCAGGTGGAGCACCCCTGCGGTCACTGGAAACCTGCAGACCCAGCGG
661 ----- 720
CAGGGTCACTAGACGGTCCACCTCGTGGGACGCCAGTGACCTTTGGACGTCTGGGTCCGC
a V P V I C Q V E H P A V T G N L Q T Q R -
B
s
A pH
X S p lg
b m a 2i
a l L 8A
l 1 l 6l
/
TATCTAGAAGTACAGTATAAGCCTCAAGTGCACATTCAGATGACTTATCCTCTACAAGGC
721 ----- 780
ATAGATCTTCAATGTCATATTCCGAGTTCACGTGTAAGTCTACTGAATAGGAGATGTTCCG
← #30515 (4B)
a Y L E V Q Y K P Q V H I Q M T Y P L Q G -
B
AsSX S H N
Vrmn m iHA s
aFaa l npf p
l l l l cal H
l l l l 213 l
/
TTAACCCGGGAAGGGGACCGCTTGAGTTAACATGTGAAGCCATCGGGAAGCCCCAGCCT
781 ----- 840
AATTGGGCCCTTCCCTGCGCGAACTCAATTGTACACTTCGGTAGCCCTTCGGGGTCGGA

a L T R E G D A L E L T C E A I G K P Q P -
GTGATGGTAACTTGGGTGAGAGTCGATGATGAAATGCCTCAACACGCCGTACTGTCTGGG
841 -----+-----+-----+-----+-----+ 900
CACTACCATTGAACCCACTCTCAGCTACTACTTTACGGAGTTGTGCGGCATGACAGACCC
a V M V T W V R V D D E M P Q H A V L S G -

B
S
P
AB1
pa2
an8
126
//

N H
S i
P n
B d
2 3

CCCAACCTGTTTCATCAATAACCTAAACAAAACAGATAATGGTACATACCGCTGTGAAGCT
901 -----+-----+-----+-----+-----+ 960
GGGTGGACAAGTAGTTATTGGATTGTTTTGTCTATTACCATGTATGGCGACACTTCGA-
(-ggatatcactcagcataatgtata t7 Promoter)
a P N L F I N N L N K T D N G T Y R C E A -

41-mer 33713

T
t
h
3
#30511 (2A/3A) →
TCAAACATAGTGGGGAAAGCTCACTCGGATTATATGCTGTATGTATACGATCCCCCACA
961 -----+-----+-----+-----+-----+ 1020
AGTTTGTATCACCCTTTTCGAGTGAGCCTAATATACGACATACATATGCTAGGGGGGTGT
a S N I V G K A H S D Y M L Y V Y D P P T -
ACTATCCCTCCTCCCAACAACCAACCACCACCACCACCACCACCACCACCACCATCCTT
1021 -----+-----+-----+-----+-----+ 1080
TGATAGGGAGGAGGGTGTGTTGGTGGTGGTGGTGGTGGTGGTGGTGGTGGTGGTAGGAA
← #30512 (2B)
a T I P P P T T T T T T T T T T T T T T T T I L -

B
S A
P v
M a
1 1

ACCATCATCAGATTCCCGAGCAGGTGAAGAAGGCTCGATCAGGGCAGTGGAATCATGCC
1081 -----+-----+-----+-----+-----+ 1140
TGGTAGTAGTGTCTAAGGGCTCGTCCACTTCTTCCGAGCTAGTCCCGTCACCTAGTACGG
← #30513 (3B)

start T.M.

1131

//

AAAAAATGTTCTTTGGAAAGAAAAAGCGGCGGC
 1501 -----+-----+----- 1535
 TTTTTTTACAAAGAAACCTTTCTTTTTCGCGCGGC

Enzymes that do cut:

AccI	Afl3	AlwNI	ApoI	ApaI	ApalI	AvaI	BalI
BamHI	BanI	Ban2	BcgI	BglI	BsaAI	BsaBI	BsaHI
BsgI	BsiEI	BsmBI	Bsp1286	BspHI	BspMI	BsrFI	BstZ171
Clal	Dra2	DrdI	DsaI	EaeI	EatI	Eco57I	EcoNI
EcoRS	Hae2	HgiAI	Hinc2	Hind3	HpaI	KasI	NarI
NotI	NspB2	NspHI	PpuMI	PshAI	PssI	PstI	Pvu2
SapI	Scal	SfcI	SmaI	SmlI	Sst2	StuI	Tth32
XbaI	XcmI	Xho2	XmaI	Xma3			

Enzymes that do not cut:

Aat2	AclI	Afl2	AgeI	AscI	Asel	Asp718	Asu2
Avr2	BbsI	BciVI	BclI	Bgl2	Bpu1102I	BpmI	BsaI
BsiWI	BsmI	BspEI	BssH2	BstE2	BstXI	Bsu36I	DraI
Dra3	Eam1105	Eco473	EcoRI	FseI	FspI	KpnI	MluI
MunI	NcoI	NdeI	NgoMI	NheI	NruI	NsiI	PacI
PflMI	PmeI	PmlI	PvuI	Rsr2	SalI	SfiI	SgrAI
SnaBI	SpeI	SphI	SrfI	Sse8387	SspI	SstI	StyI
SwaI	Tth31	XhoI	XmaI				

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